

IN THE CLAIMS

Please amend the claims as follows:

sub 1. (Amended) Writing process on a multi-layer material composed of thin layers, in which said material is irradiated by means of a beam of light ions, having an energy of the order of or less than a hundred keV, wherein the material is a thin-layers material comprising buried layers deposited on a substrate, wherein one or more regions having individual sizes of the order of 1 micrometer or less are selectively irradiated, the irradiation dose being controlled so as to be a few 10^{16} ions/cm² or less, the irradiation modifying the composition of atomic planes in the material at an interface between two layers of the latter without mixing different layers of the multi-layer material.

2. (Amended) Process according to claim 1, wherein the irradiation is carried out through a mask.

A₁ 3. (Amended) Process according to claim 1, wherein the writing process is adapted for the magnetic or magnetooptic recording of binary information, for the production of discrete magnetic materials, of magnetic memory circuits or of magnetically-controllable logic circuits, or for the production of sensors.

4. (Amended) Process according to claim 1, wherein the writing process is adapted for optical recording process of a read-only memory type.

5. (Amended) Process according claim 1, wherein the recording material is a magnetic multi-layer material, the individual layers of which are pure metals or transition metal alloys or rare earth alloys.

6. (Amended) Process according to claim 1, wherein the writing process is adapted for producing magnetically-controllable optical circuits using a controlled variation of the optical index component associated with magnetism.

Please add the following new claims:

7. (New) Process according to claim 1, wherein the beam of light ions comprises He^+ ions.

8. (New) Process according to claim 2, wherein the writing process is adapted for the magnetic or magnetooptic recording of binary information, for the production of discrete magnetic materials, of magnetic memory circuits or of magnetically-controllable logic circuits, or for the production of sensors.

A2 9. (New) Process according to claim 2, wherein the writing process is adapted for optical recording process of a read-only memory type.

10. (New) Process according to claim 2, wherein the writing process is adapted for producing magnetically-controllable optical circuits using a controlled variation of the optical index component associated with magnetism.